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TEACHING AND RESEARCH, THEIR INFLUENCE ON SOCIAL CHANGE.

BY- BEBOUT, JOHN E.
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THE AUTHOR EXAMINES THE INFLUENCE OF TEACHING AND RESEARCH, PRIMARILY THE WORK OF THE UNIVERSITY, ON SOCIAL CHANGE. HE STATES THAT TEACHING AND RESEARCH ARE THE FOREMOST GENERATORS OF SOCIAL CHANGE, THUS THE SUCCESS WITH WHICH WE COPE WITH PRESENT AND FUTURE PROBLEMS DEPENDS ON THE UNIVERSITY. THE UNIVERSITY IS IN A UNIQUE POSITION OF RELATIVE INDEPENDENCE AND FREEDOM, AND MUST MAINTAIN THIS INSTITUTIONAL INTEGRITY TO HAVE THE NEEDED EFFECT. THE UNIVERSITY'S INFLUENCE MUST BE MAINLY A HUMANIZING ONE; THE UNIVERSITY MUST ASSESS SOCIETY'S NEEDS AND RESPOND TO THEM BY PROVIDING HUMANE DIRECTION TO SOCIAL CHANGE, IT MUST STRESS PLANNING, AND TRY TO FORESEE THE EFFECTS OF CHANGE. THUS IT MUST EMPHASIZE TEACHING, PARTICULARLY THE TRAINING OF TEACHERS, GIVE MORE ATTENTION TO INTEGRATING AND COMMUNICATING RESEARCH, STRESS THE HUMANITIES AND SOCIAL SCIENCES, AND PURSUE SCIENTIFIC STUDIES WITHIN A SET OF VALUES AND RESEARCH WITHIN THE FRAMEWORK OF POLICY. THE COMPLETE DOCUMENT, "POLITICAL BACKGROUND OF ADULT EDUCATION, THE UNIVERSITY OF URBAN SOCIETY," IS ALSO AVAILABLE FROM THE CENTER FOR THE STUDY OF LIBERAL EDUCATION OF ADULTS AT BOSTON UNIVERSITY, 138 MOUNTFORT ST., BROOKLINE, MASSACHUSETTS 01246, FOR $1.25. (EB)

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POLITICAL BACKGROUNDS OF ADULT EDUCATION

The University in Urban Society

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TEACHING AND RESEARCH: THEIR INFLUENCE ON SOCIAL CHANGE

by

John E. Bebout

Bebout examines the influence of teaching and research—primarily the work of the university—on social change. Teaching and research are the foremost generators of social change; thus the success with which we cope with present and future problems depends on the university. The university is in a unique position of relative independence and freedom, and must maintain this institutional integrity to have the needed effect. The university's influence must be mainly a humanizing one; the university must assess society's needs and respond to them by providing humane direction to social change; it must stress planning and try to foresee the effects of change. Thus it must emphasize teaching, particularly the training of teachers, give more attention to integrating and communicating research, stress the humanities and social sciences, and pursue scientific studies within a set of values and research within the framework of policy.

John E. Bebout is Director of the Urban Studies Center and Professor of Political Science at Rutgers. He was Executive Assistant to Governor Charles Edison of New Jersey and consultant to the Alaska Statehood Committee, the U. S. Commission on Intergovernmental Relations, and the New Jersey Commission on Municipal Government. He is co-author of Where Cities Meet—The Urbanization of New Jersey.

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TEACHING AND RESEARCH: THEIR INFLUENCE ON SOCIAL CHANGE

Background

In order to establish the context of this discussion, I must begin with some rather elementary observations and references to history. It would be easy to dismiss the influence of teaching and research with the obvious statement that the discovery and dissemination of new knowledge or presumed knowledge has always been the principal generator of social change. It is mainly through learning that people create new conditions for themselves, and the process both constitutes and induces what we call social change. Research is a sophisticated, hopefully short-cut technique for multiplying knowledge. Through their research and teaching, therefore, modern universities play a major role in producing social change.

It is true that social change may be induced by alterations in the physical or human environment resulting from external forces, such as changes in climate or the productivity of the soil, natural disasters like fire or flood, or contact with other groups of people. But the social effects of even these external influences are conditioned by the learning or teaching processes of the people affected. For practical purposes we can probably rule out biological change or human evolution as an influence on social change except on a very long-term basis, although this may not be possible in the future if the eugenicists succeed in influencing public and social policy appreciably. In any event, any changes resulting from the conscious alteration of the biological quality of mankind could prove to be the greatest or perhaps the last achievements of research and teaching.

The most profound or significant social changes often result from research and teaching directed toward quite different ends. Thus, for example, the communications revolution and the so-called knowledge explosion are to a large extent the results of scientific and technological developments motivated by war and national defense. Many of the social problems concentrated in our old cities are the results in part of the agricultural revolution which was the product of the technological revolution and of research and teaching emanating from the land-grant colleges. The contribution of the Land-Grant College Act to urbanization

may prove to be of more long-range importance than its contributions to rural life.

Research and teaching are, of course, motivated by a variety of attitudes toward social change. They have often been directed toward stopping, preventing, or reversing a change considered undesirable. At the other extreme, they are the principal weapons of the revolutionary. A more nearly neutral purpose, commonly espoused in the schools, is simply to help people and institutions to accommodate or adjust to ongoing changes. We are now in this country, it seems to me, entering an era in which research and teaching are being more and more purposefully used as tools for planning, guiding, and administering social change.

This country has pioneered in the use of research and teaching to support national or widely held public purposes. Thus the colonial colleges were established partly to enable the new, frontier society to develop its own intellectuals, especially its own lawyers, clergymen, and other professionals, uncontaminated by bias built into education in the mother country. It is significant that many of the leaders in the American Revolution, especially in the era of constitution-making, studied in these American colleges. It was widely believed by the founding fathers, and most eloquently expressed by Thomas Jefferson, that widespread education of the people for citizenship, as well as for personal competence, was a necessity for the kind of republican society they were trying to build. Hence came the national concern for education expressed in acts such as the Northwest Ordinance, even before the Constitution of 1787. From these and other early educational initiatives ultimately developed the American public school and state university systems, new to the world and still in many respects distinctive to this country. Later, the Land-Grant College Act initiated an entirely new kind of partnership between national, state, and local authorities in the educational enterprise, a partnership which has been greatly expanded in scope and is now, as a result of legislation enacted during the present administration, burgeoning at an explosive rate.

In general, I am sure, we all assume the basic soundness of the course that American society and its educational handmaid have taken and the essential validity of the long-range purposes and goals toward which we have been striving. Nevertheless, we must recognize that social change is not necessarily "good," and may be destructive of human

values that we hold to be important. Even in America, social change may result from human ignorance, folly, and wickedness, as well as from wisdom and goodness of purpose; and research and teaching can and do serve the former as well as the latter. There was, for example, the teaching, backed up by research of a sort, which along with the cotton gin fastened the "peculiar institution" of slavery on the South after that institution was supposed to be on the way out. Again, consider the social harm that has been done and continues to be done by false teaching about racial differences.

Perhaps perfect knowledge would bring perfectly benign results. Knowledge and godliness have, in most faiths, been assumed to be highly correlated. Nevertheless, we must admit that we have a long way to go before research and teaching can be counted on invariably to enhance the good, the true, and the beautiful. We will certainly know how to create life in a test tube before we know how to derive these qualities directly from research or even to describe them in the language of science.

Yet in our culture the whole knowledge enterprise is largely justified and heavily motivated by a faith that research and teaching can and do help "make things better." On the strictly material level, there is ample evidence in support of this faith. The fact that we are currently so deeply troubled by doubts about how knowledge can contribute to more general human happiness, well-being, and dignity may portend the day when the veil between knowledge and truth will be lifted and the researcher, the teacher, and the preacher will work as one.

Despite the centuries-old Judeo-Christian doctrine of the unity of goodness, the values we have been taught to live by are fractioned out and expressed in categorical, self-limiting, and often contradictory terms. In like manner, despite a scientific belief in a universe of law, the teachings of science have been parceled out in bits and pieces by practitioners of different disciplines and schools. In each case ultimate unity, if it exists, is obscured, and harmony, if it appears, tends to be parochial and imposed.

Is it too much to suggest that there is a connection among such diverse contemporary phenomena as the attempts of Einstein and other scientists to break through old categories and penetrate to ultimate re-

ality in the physical universe, of men of religion and theology to disengage from cramping and divisive dogmas and discover a deeper and more nearly universal meaning of goodness, and of men of action to develop programs and forms of organization directed toward meeting the needs and wants of persons and societies as wholes rather than as separate and unrelated entities? In the jargon of modern policy or program research and management, the "systems approach" is being tried simultaneously in all these fields. The fact that it is being tried by people starting from quite different backgrounds and premises suggests that there may be in the making a framework and methodology that will enable research, without becoming tyrannical, to play a more direct and creative role in the search for meaning and value in the life of man.

The findings of research and the teaching based on them have in the past invalidated many dearly held values by destroying their supposed factual base. By the same token, new knowledge brings new strength or support to other values. For example, fairly recent research in several areas has given support to some of the essential values built into the civil rights and economic opportunities programs now under way in this country.

There doubtless are short-range situations when it may appear that ignorance is bliss and that it is therefore folly to be wise. However, in an age of accelerating social change, it is doubtful if we can afford much more of the bliss of ignorance. In short, ignorance, like sloth and sheer fecklessness, must be equated with folly. Ignorance may once have furnished some excuse for the lack of sanitation which in times past has disrupted societies or caused most unpleasant changes in their behavior. Even in this more enlightened age, to use a Jeffersonian euphemism, we still are creating social problems and pathologies by our careless treatment of land, air, water, and the biological environment. A similar observation could be made about the monumental folly involved in perpetuating the ancient, distinctively human institution of war, powered by modern weapons.

Someone may remind me that this paper is supposed to be about the influence of teaching and research, presumably of wisdom, on social change. Having already pointed out the sometimes questionable connection between teaching and wisdom, I merely observe at this point that war on ignorance and folly in their effect on society is a major, never-

ending business of research and teaching. Indeed, the more we learn, the greater the power of knowledge to do good, the greater is the power of ignorance to do harm.

I have already suggested that this country is in the early stages of an era in which there will be increasing attempts at planning, guiding, and administering social change, and that research and teaching will be more and more called upon in support of this effort. In evidence of this, one need only cite such comprehensive approaches to old social problems, customarily dealt with on an ad hoc or fractional basis, as the war on poverty, the "demonstration cities" program, the efforts to relate a variety of public programs to some kind of metropolitan plan, and the beginnings of efforts to develop more highly integrated and interrelated attacks on such problems as transportation, water resources, open space, and economic development. Admittedly, these efforts are all in their infancy and display the crudities resulting from inexperience and inadequate commitment. But the fact that we have gone so far that the expression "social planning" is no longer necessarily a dirty word coined by Communists is indicative of a real change of climate from the time when the National Resources Planning Board was strangled in its crib during New Deal days.

The remainder of this paper will deal primarily with the role of university-based teaching and research in connection with the planning and direction of social change and with the coordination of public and private activities as they affect and are affected by the changes that a pyramiding technology makes inevitable.

The University and Social Change

I have already said that teaching and research produce social change and that social change, however generated, produces new needs for teaching and research. I have suggested that this interaction has long been recognized more or less explicitly in this country and that the distinctive American educational system, including the system of higher education, is in part a function of this recognition. The focus from now on will be primarily on the universities: on the nature and magnitude of their responsibilities with respect to social change; on the assets and liabilities with which they face these responsibilities; on some of the problems of identity, decision, external relations, and internal reorganization posed

by the issues and imperatives of change; on the responsibility of the larger society of state and nation for the care and feeding of universities as continuing sources of enlightenment; and on the universities' need to come to terms with the future as they have more or less with the past.

I am assuming that we wish to achieve a level of social planning that will assure survival and an enlargement of human well-being within the context of a pluralistic, fairly permissive society which continues to value variety, personal freedom, and the integrity and initiative of the individual. The hope of success in this effort, I firmly believe, depends to a very considerable extent upon the way in which American universities play their role. As of now, they constitute one of our best hedges either against disaster born of ignorance and folly or against the smothering of our most precious social values and national goals in an Orwellian nightmare.

This faith in the universities is based largely on the very special position that they have come to occupy in American society. I have already hinted at some of the historical background for this position. American universities constitute the largest, most versatile, and most talent-laden system of higher education in the world. Moreover, they are the capstone of by far the most powerful educational establishment (please excuse the expression) on the globe. And, while they do not run the extensive public and private research and development enterprises, they are essential to them as suppliers of knowledge and talent.

The potency and prestige of the universities is evidenced by the ways in which governments at all levels, private industries, and voluntary organizations rely upon them for special jobs of research, teaching, and consultation, and look to them not only as reservoirs of knowledge but also as pools of talent for a multiplicity of missions. American universities owe this position in part to two quite distinct yet in some respects merging trends: (1) the trend toward the development of strong private institutions, which began with the founding of the colonial colleges; and (2) the trend toward public education which started in the earliest days of the republic and has resulted in a system of public universities in all the states, purposefully oriented toward service to the society through the education of competent participating citizens, the training of needed professionals, and the discovery of useful knowledge.

The unique land-grant college system for relating research and teaching to each other and to the emerging needs of society through an extension system that acts as an intelligence service for two-way communication between the university and the community has enhanced the social relevance of all American universities. The land-grant tradition has spread into the private universities and caused many of them to assume a public service role hardly distinguishable from that of the other institutions. On the other hand, the existence of strong private universities and colleges has supplied yardsticks and competition which have helped the public universities to achieve levels of quality and maintain a measure of independence that they might not otherwise have enjoyed. Fortunately, there is every reason to believe that this dual system will survive and grow in vigor in both its parts. It is now settled public policy for government to lend support to private universities not only through research contracts but also by other devices in aid of instruction, students, and the expansion of the physical plant. While it seems inevitable that the public universities will have to absorb the major part of the increasing business of higher education, the strong position of private institutions seems assured not only because of the public support just mentioned but also because of continuing preferential aid from foundations and other private donors.

In addition to these circumstances, the element of decentralization built into the public system by virtue of the fact that the fifty states and a number of cities, not the national government, are in charge of all but a few highly specialized institutions, puts the American system in a unique position for dealing with strong outside institutions while maintaining a high degree of independence and institutional integrity.

Sometimes it seems to me that there is too little awareness, both in and out of the universities, of the strength and crucial nature of the universities' position. What universities and the American people make of this position for the future will depend heavily upon how the universities themselves resolve some rather critical issues and problems and meet other matters of high obligation during the next generation. Important choices must be made and priorities determined, not once and for all, but on a continuing basis. Powerful attention must be given to the problem of "social change" within the institution, the problem of the adaptability of the institution and its programs and methods to the ex-

panding demands of a changing society. And above all, universities must perform some extremely vital services without which the society cannot survive and which no other institution in existence or in conceivable prospect can perform.

Underlying all other questions and inherent in most of them is the question of institutional identity or definition. What is it about a university that distinguishes it from other institutions and gives it its peculiar function? Or to put the question in more active terms, what character or stance must the university maintain in order to hold its license for leadership in the production and dissemination of knowledge and intellectual and professional competence?

I once wrote, "The university should always remember that it is an educator, not the governor of men."[1] Unfortunately, this sentence by itself does not say very much. In the article in which it appears, I discussed at some length the matter of values and goals, the problem of involvement, and the terms on which university representatives may deal with decision-makers caught up in and seeking to manage urban change. In general, I took the position that the university must have a commitment to the melioration of urban society, that it cannot be neutral with respect to such a basic issue as the goal of "integration of the human beings who make up the society," and that it must take some risks as the price of effective participation in the application of knowledge to affect or direct social change. About the best I could produce in the way of advice on how to survive outside the cloister was to restate in various ways the proposition that the university must find its own way to serve the higher goals of the society in a manner compatible with the values of scholarly inquiry and responsible education. In short, I was suggesting that the function of the university with respect to social change in our urban society must be based upon sound scholarship, motivated by social commitment that is powered by a degree of daring, and governed by an essentially political sense of the limits of feasibility. I hope it is not a bad sign that I find myself taking substantially the same position today.

Let me add here one observation that may reveal a personal bias or, I would prefer to say, a sense of style. It never has made any sense

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1. John E. Bebout, "University Services to the Urban Community, American Behavioural Scientist, Vol. VI (September, 1963), No. 6, pp. 21-39.

to me to have educators assert publicly, as one did at a well-known teacher's college back in the late 1920's, that the principal duty of teachers (in this case, public school teachers) is to create social revolution. This kind of self-assertive overstatement can be accepted as true in a certain context, but it certainly confuses the public and arouses a considerable segment to take protective measures against what is largely an imaginary threat. Most university researchers and teachers who go about their proper business will, whether they intend it or not, contribute to the inevitable continuing social revolution. They should, indeed, intend it in the sense that they should at least be aware of and therefore conscientious about the probable consequences of their actions. But they need not and should not overadvertise themselves as men of action.

There are, of course, limits on the university's freedom of decision and choice. This freedom is limited by university organization and tradition, by the nature and degree of flexibility of the demands and responses of governmental and other institutions, and by the sheer weight of the massive and mounting demand for basic undergraduate and professional education which loads current facilities and resources almost unbearably. Yet I suggest that in reality universities have more freedom and autonomy than they often recognize and that they can learn to retain and stretch this freedom, partly by facing up specifically and hard-headedly to certain questions of priority and propriety. Fortunately, universities have begun to break through one basic limitation—their own long-standing failure to recognize the facts of accelerating changes that are shaking up old institutions all over the world.

The university world has already made important progress toward joining the late twentieth century. The universities, along with the rest of the country, have, however belatedly, discovered that as a result of urbanization the society of which they are now a part is a very different one from that in which most of them were established. This post-World War II discovery of urban America came later than it should have and did not really begin to have much influence on university policy until the late 1950's. Witness the fact that most conferences of the type for which this paper was written, a conference on the university in urban society, have occurred since that period. In any event, the discovery has now occurred. That discovery, together with the discovery of outer space and a new view, amounting to rediscovery, of the rest of the world, has, I

hope, sufficiently shaken up the universities to enable them to slough off outmoded attitudes and ways and to become more venturesome and innovative. Let us now look at a number of questions having to do with the use of present and future university resources, questions that need to be considered in the context of urban or, as some would have it, of post-urban society.

One of the most difficult problems to resolve has to do with the proper balance between different kinds of teaching and research. The teaching demands imposed upon institutions of higher learning are far in excess of the readiness of those institutions to meet them satisfactorily. Yet in our open society, dedicated to the proposition that everyone is entitled to as much education as he can take, we must meet this demand in some way. We are, to be sure, in the process of lessening the pressure on the universities by the belated development of state and community colleges, junior colleges, and technical institutions. But if this development is not to result for an excessive period in inferior teaching of large numbers of students, the universities must in some way meet the need to train and retrain teachers for these institutions. Since it is the products of these institutions who will constitute the great bulk of the college-trained citizenry of the country in the years ahead and will provide a considerable number of those who go on for graduate or professional education, the kind of teaching they receive, especially as it affects their understanding and attitudes toward social change, can be crucial for the future. At the same time, the realization of the need for the repeated or constant re-education of people in many walks of life to meet the vocational, civic, and personal requirements of a changing society is increasing the demand upon universities to engage in continuing education and to prepare teachers for continuing education in other settings.

"New math," new geography," and other new approaches to teaching subjects, and new insights into the motivations and capacities of students in elementary and secondary schools are putting pressures on our whole teacher training system, pressures which it is unprepared to meet and which call for participation of university people who have regarded teacher training as separate or apart from their proper concern. Some earlier experimental programs now being augmented by the regional laboratories set up under the Primary and Secondary Education Act have begun to involve such people in research and demonstration programs that, if devel-

oped with sufficient skill and resources, could effect a much needed revolution in the whole system of public education. This, it seems to me, is a matter of the highest priority if we are to have a citizenry able to live with and give some rational direction to social change.

The immediate and urgent need for more, better, and more versatile teaching by the universities necessarily raises the unpleasant question of the allocation of resources between teaching and research. We need new knowledge, but I cannot help feeling that there is something in the old farmer's remark that he did not need new knowledge because he wasn't farming anything like as well as he knew how already! Unwelcome as the thought may be, especially to a great many highly competent and aspiring academic people, we may have to ask some of them for the time being to "neglect" their research in favor of students. For too many this would be the reversal of the customary practice, encouraged, I would suggest, by questionable criteria for promotion and prestige. It does little good to society to pile up new knowledge in laboratories or in more or less esoteric professional publications, unless we take the time and the trouble to communicate that knowledge to others—not only to others who may build on it for further research, but also to others who may communicate and use that part of it which is capable of being put to work in the service of men and society. In short, we need to consider the problem of matching the accumulating products of the knowledge explosion with an equal capacity for disseminating them.

Another problem in resource allocation involves the balance between investment in hard science and technology on the one hand, and social science, management techniques, and the humanities on the other. Hard science and technology have had a very vigorous run, largely as a result of the exigencies of "national defense." These exigencies have accelerated basic exploration into the nature of the universe and have spawned new communications and space technologies. At the same time, they have increased our experience with various kinds of interdisciplinary research and advanced the so-called systems approach to both research and management. Social science has been brought into play in a variety of ways, but, relatively, the "soft areas" of knowledge have not been advanced at anything like the pace of the "hard areas." Since we need more profound knowledge of the physical universe and could do with better technologies derived from that knowledge, I would not suggest that progress in this

area should be appreciably slowed. I do, however, suggest that a greater proportion of our resources should be allocated to the social science and management areas, because there can be no question that the most troublesome areas of ignorance, from the point of view of human well-being, are in the social and institutional sectors.

By the same token, we need to increase, not to decrease, as we seem in danger of doing, attention to the humanities. I speculated hopefully somewhat earlier that we might look forward to more positive contributions from science and scientific method to the clarification and development of the values and goals without which life would have no savor and social development could have no rational direction. Little or none of the world's store of wisdom has sprung full-blown from the test tube, the simulation center, or the behavioral scientists' survey sample, although it is being increasingly fed by information derived from these sources. Wisdom and its handmaid, perceptivity, have, throughout the centuries, been enriched especially by poets and other creative writers; by artists; by philosophers and seers; by historians with the imagination to distinguish as well as to relate past, present, and future; and by "soft" social scientists who have studied human behavior and institutions with some of the art and awareness of these others, tempered more or less by an infusion of method derived from the sciences. Nothing that has happened has made these people and their roles obsolete, and there appears to be no prospect that they will become obsolete to the end of human time. Society may have an increasing need for them as man's knowledge and mastery of nature grows, and the universities have a corresponding obligation to nourish them and give them voice.

Even the values inherent in the scientific method—rationality, integrity, open-mindedness, freedom to pursue and to utter the truth—have not simply been self-generated by science nor do the social sanctions for these values rest solely on the scientific enterprise. Moreover, if man is to survive, and if he is to remain humane in any sense that most of us would accept, the application and even the pursuit of science must be monitored by values that, so far as can yet be foreseen, must be derived from the whole corpus of human experience and the full range of human insight. If this is true with respect to science and scientists, it is even more emphatically true with respect to social planning and all those who seek to give meaningful guidance and direction to social change,

whether large or small. In short, the planner, the administrator, the politician, the sovereign citizen all need the wisdom, to say nothing of the consolation and joy that are peculiarly the cultural yield of the humanities as surely as they need the knowledge and skills derived from the sciences, physical, natural, and social.

Assuming, as I suggested earlier, that we need more emphasis on research in the social sciences, we must consider the problem of allocation as between so-called basic and applied or policy-oriented research. There certainly should be an increase in research directed to basic, theoretically derived problems. The whole history of science teaches us that great progress in applied science is dependent upon progress motivated primarily by the simple desire to know more about the nature of things. The Einstein contribution to nuclear weaponry is a striking case in point. However, since we must act as wisely as possible on questions inexorably raised by galloping social change, there is need for a great deal of respectful attention by university people to applied or policy-oriented research which puts the findings of "pure" science into a new context, relating them to facts of other orders, and thus also producing new knowledge.

The demand for action on such questions as poverty, civil rights, and decaying cities, accentuated by the natural jitteriness of politicians and leaders of protest groups, has resulted in the launching of vast new programs with a minimum of well-based planning, and in some cases with hardly any monitoring or evaluation. There is, under the circumstances, a strong temptation for universities to get into the action. I suggest that they need to be "where the action is," but that their prime function should be to insist with all the power of their position upon the necessity for basing action on knowledge; knowledge injected into planning and policy-making, knowledge applied by properly educated administrators, and knowledge applied to evaluating and testing the results of action. If universities get too deeply into the action, they run the risk of losing their ability to make this vital point effectively and to make their appropriate educational contributions.

The nature and variety of a given university's relationships with social action depend appropriately on distinctive elements in its style, competence, and posture with respect to the local, state, and national communities. It is one of the strengths of the American system of higher education that institutions differ in these respects. Each university must dis-

cover for itself its best social role, partly in the light of the roles of others in its area or category. In evaluating its proper role and degree of involvement, it must face some hard questions and, as I have said before, exhibit some daring.

Whom should the university seek to teach directly? For a few it may be enough to say that except for providing occasional public lectures, the university should teach only enrolled undergraduate, graduate, or professional school students. What research should the university undertake? The answer might be only that research which faculty members, individually or collectively, choose to undertake on their own initiative.

Such a university might have a profound effect on social change. Because of the mystique of the classroom as the domain of the free and presumably competent scholar, it could have a considerable influence on future practitioners on the body social and politic without being called to question in the market place or at the hustings.

Most universities have, however, long since given this up and have provided shelter by embarking on various programs of extension teaching and sponsored or contract or problem-oriented research.

Whom should they teach in extension? Members and employees of the establishment? Leaders of protest and dissent? Persons seeking to improve their vocational competence or life enjoyment? People anxious to improve their political skills in order to agitate effectively for more political power and the fruits thereof? My answer is that many universities should be prepared to teach all of these, recognizing not only the differences in style and function involved but also the differential problems of financial support and public relations. Similarly, research activities should not be confined to seeking acceptable (or otherwise unpublished) answers to problems posed by the right people.

Fortunately for the university's ability to work for the poor as well as the rich, for the outsider as well as the insider, we are in a period when both government and foundations are supporting teaching and research directed toward the reduction of barriers to participation and exercise of power by the hitherto neglected segments of society. The university should take full advantage of this opportunity and strive to see to it that the society of knowledge, competence, and power becomes and remains truly open to all.

As I have said elsewhere, this does not mean that the universities should try to do all the teaching and all the research required to this end. Far from it. It is, however, highly appropriate for them to lead in finding out how to do teaching that has not been done before by engaging for a time in experimental or demonstration projects with a view to developing the techniques and training of teachers (who may not necessarily be professionals in the traditional sense) to carry on the work under the auspices of other agencies.

In like manner, limited social action demonstration projects are appropriate and, in the present state of the art, necessary methods of learning about social change that modern universities cannot neglect. Such projects may involve a rich combination of research and teaching experiences almost certain to enlighten the university, whatever their immediate contribution to the community may be. The possible forms of university involvement in such projects may range from direct sponsorship and management to limited participation under contract or agreement in particular aspects of it. Full sponsorship is probably undesirable except in rare instances, but for maximum benefit the university should be involved in planning and be privy to administration; it should also act as purveyor of instruction and advice or performer of research. One caveat is important: A university should assume no responsibility, even that of observer, for which it does not have some competence and for which there is not in sight adequate fiscal and personal support.

The relationships between the university's teaching and research roles and social change cannot be fully assessed or properly managed without reference to the university's status or behavior as a corporate citizen of its community. Almost any university, even the most cloistered, must recognize special obligations toward the community in which it is located, if for no other reason than that it is a significant holder of property, generally tax exempt, an employer of local people, and a generator of governmental and social problems in the area. Unfortunately, universities have not always been the best neighbors or the most socially minded landlords of income producing property. As universities expand, especially in congested urban areas, the importance of these relationships increases. Indeed, in many small to medium-sized cities or neighborhoods of large cities, a university may well be or become by any measure the largest and most powerful corporate institution. Many of them, of course,

are deeply involved in urban renewal activities for their own benefit, and an increasing number have come to recognize that their own survival in their chosen location, as well as the most elementary sense of public responsibility, requires them to be concerned with aspects of the human and social development of the area, which have too often been neglected in urban renewal. Only recently have the obligations of Columbia University been pointedly adverted to in the terms of a grant from the Ford Foundation.

While these local "town and gown" relationships have generally been thought of as primarily matters of concern for the administration, I suggest that they cannot be properly dealt with without reference to their effect upon and their potential constructive use of university teaching and research. The decision of a university to locate or relocate its whole plant or important elements in it at an urban, suburban, or rural site certainly should be affected by the kind of environment in which its teaching and research should be conducted and the kind of contacts with the community deemed desirable for its faculty and students. Equally important in determining university policy with respect to location should be recognition of the fact that its presence and its future growth are bound to be important factors in producing social change, including difficult social problems, in the area.

University obligations in this connection extend beyond such elementary matters as seeing to it that its presence does not put excessive uncompensated burdens on the local government or subject displaced people and businesses to unreasonable losses. They should engage research and teaching in efforts to develop an understanding both within and without the university of the university's community relationships and to assist in making them as constructive as possible for all concerned. These efforts may well involve the university in a more active role as a corporate citizen of the local community than would otherwise be appropriate in connection with an outside demonstration project. In any case, the university's community of residence provides a laboratory situation which it has both a unique opportunity and a special obligation to exploit.

The problem of allocating university resources is further complicated by the fact that the resources themselves are limited. In an affluent society able to produce the material goods it needs with a smaller and smaller proportion of the total manpower, universities should look

forward to and demand a larger absolute and proportionate part of national income and talent. Nevertheless, universities are necessarily in competition with other institutions and presumably will always have less at their disposal than they think they might be able to use. This fact of life underscores the importance and the difficulty of some of the questions of choice discussed above. It also should lead universities to try constantly to develop the capability of other institutions to perform various kinds of research and educational activities of specialized or limited application or of a repetitive nature. In other words, universities should always be on the frontier of the knowledge enterprise and, so far as possible, educate others to carry on necessary, more or less routine activities once they have been demonstrated. Failure to do this would tend to result in the accumulation of excess baggage, including large numbers of people with vested interests in continuing to do things as they have always done them, and would accentuate the tendency already displayed in some universities to excessive mass which becomes either top-heavy or torpid. We have, therefore, insisted that it is the business of the Urban Studies Center at Rutgers to be constantly working itself out of old jobs so that it can take on new and more exciting ones.

The complaint is often made that government—especially the national government—foundations, and private institutions have more to say than the universities about the allocation of resources. I would answer that the universities have really not been so badly put upon as they sometimes claim, and that on occasion it has been a very good thing that they have been induced by promise of outside funding to change emphasis or develop new activities. Be that as it may, if the universities are reasonably clear about their proper agenda, they are in a good position to educate governments, foundations, and private industries into a mood to support it. In short, the extent to which the universities, in their own special field, the dissemination and development of knowledge, are to be actors rather than reactors will depend largely upon themselves, acting singly and, for vital limited purposes, on a common front.

One of the most important objectives of a common front should be to present forcefully to governments and other institutions the fact that if they want more help from the universities, they must assume an increasing responsibility for institutional support. The universities must make it crystal clear that their ability to undertake projects and to carry

them through productively depends upon the continuing strength and vigor of the institution and that neither government nor private industry should ask the universities to undertake projects at the expense of their basic teaching role or of the freedom of their faculties to pursue within reason their own self-directed intellectual interests. Government and business must get over the notion that a university is like an old-fashioned longshoremen's hiring hall, with a lot of professors standing around, ready to "shape up" on call. And foundations, as well as government, need to ask themselves more often, when they give a "pump-priming" grant, just where the continuing flow of water is going to come from, and at what cost to whom.

Perhaps more difficult to deal with than governments and foundations in the effort to maintain institutional integrity, competence, and social relevance, are the academic and professional guilds that have largely determined the university's image and style. The professional guilds—doctors, educators, engineers, lawyers, social workers, and others—that seek to control curricula and the output of new members of their guilds, have long been a force tending toward rigidity and conservatism. In a somewhat different class, but not very different in their aspirations and influence, are the academic guilds, whose members staff the faculties in science, social science, and the humanities. To a very considerable extent, the universities have traditionally been the creatures of these guilds. Like the medieval craft and trade guilds, the modern professional associations perform extremely valuable functions, but like the medieval guilds, they tend to become ingrowing, self-protective, and restrictive in their adherence to customs, rules, and standards derived from past, rather than from future conditions. At the present time, perhaps the worst thing about some of them is their unreadiness to face honestly the problem of the short supply of professionals in their field. Instead of leading, they too often resist efforts to increase this supply or to strengthen its effectiveness by training and admitting to some kind of respectable intellectual citizenship people who are able to perform many duties related to the business or the profession but who do not have full professional education.

Happily, the ultimate legal government of universities, both public and private, is vested in so-called lay boards. These boards, and the administrators who report to them, have, it seems to me, an obligation to assert more vigorous leadership in the effort to overcome the inertia

built into the system of professional associations. By the same token, the leaders and members of these associations have an even greater obligation to review their practices, to train their sights more definitely on the future, and to recognize that the only real justification for their existence is their capacity to help their members to serve society better than they otherwise could. Fortunately, some reduction in professional rigidity and isolationism can be brought about by changing the education that members of the professions and disciplines receive. There is a natural tendency to emphasize the need for more and more special knowledge at the sacrifice of general knowledge. The result is that we have increasingly competent professional technicians who tend to be increasingly ignorant of the society and total environment in which they function. The medical profession, I venture to suggest, is one of the extreme examples of the results of this tendency. However, there is growing awareness among more thoughtful and urbane professionals that they cannot perform their special functions properly in such splendid intellectual isolation. A university should require anyone who goes out to practice with its seal of approval to have some knowledge of the society and especially of the changing and developing aspects of the society. Moreover, this general or social knowledge should be included in the continuing or mid-career education to which we are of necessity becoming more and more committed. Education in social relevance should promote a continuing redefinition of the roles of the several professions and disciplines and a blurring of the lines between them. The Urban Studies Center at Rutgers and other similar agencies have, accordingly been experimenting with ways to increase the social I.Q.'s of persons in various walks of life, in mid-career.

I have already suggested that the problem of social change is as critical inside as outside the university. Universities need continually to study themselves in order to adapt their own organizations, their methods, and their programs to the requirements of change. For example, the continuing study of the university should cover conditions of promotion, compensation, tenure, and prestige, some of which now certainly tend to discourage venturing on the part of individual faculty members and tend to defeat efforts at bridging boundaries between disciplines and schools. The question of the autonomy of schools and departments is a perennially troublesome one. There is good reason for a considerable degree of autonomy in the several parts of a large and complicated uni-

versity, but autonomy is a means, not an end. It should not excuse the university from its over-all responsibility for performance. There is nothing more difficult than for a department or school that has allowed itself to deteriorate in quality or in relevance to the times to pull itself up by its own intellectual bootstraps. There should be a firm understanding among university scholars and administrators that such a condition is properly subject to correction by discreet exercise of high university prerogative. Moreover, a particular department or school should not necessarily have the right to say that the university may not do something new in its claimed field or area of interest without its consent. Internal competition can invigorate a university as well as any other institution.

Since New Deal days, at least, a new relationship has been developing between the university and the world of action. This relationship has uncovered a host of unresolved issues and problems. Some have already been discussed in one context or another, but a few others may be touched on by way of further illustration. There are, for example, the problems of the "in and out" and the part-time faculty member, to say nothing of the full-time faculty member with a heavy load of outside consultant work. These problems receive a good deal of attention from administrators and committees, with results seldom wholly satisfactory to anybody. I suggest that universities, like other institutions, should place higher value than many of them do on mobility and interchange of personnel and be prepared to adjust their policies with respect to work load, tenure, fringe benefits, and leave of absence. The inconvenience suffered may be more than balanced by enrichment resulting from the outside relationships. It should be observed, however, that flexibility in this respect is difficult with such lean staffing patterns as all too many schools and departments must now live with.

Traditionally, universities have managed many of their direct contacts with the community through extension divisions and research or other institutes, with varying degrees of distance from the more traditional academic departments. Thus, we have at Rutgers the Eagleton Institute of Politics; the Bureau of Conservation and Environmental Science; the Center for Alcohol Studies; the Urban Studies Center; the longstanding Co-operative Extension Service; the General Extension Division, which has recently organized a new Bureau of Community Services; the Insti-

tute of Management and Labor Relations, now fai[illegible]ell assimilated to general extension; and various other agencies. [illegible]bility to create distinctive structures to perform a variety of serv[illegible]es not readily conducted within the traditional framework contributes wholesomely to the versatility of the university if it is exercised with care. The usefulness of such agencies, however, depends upon their ability to draw on and contribute to the university's total capacity for relating to its changing environment. Harmonious cooperation between extension or service units and other departments is made difficult by differences in qualifications, career lines, and outlook of personnel, because effective extension must employ some people with competences and backgrounds somewhat different from those of traditional academia. This poses problems of internal politics and management for which few universities are as yet adequately structured.

This century has seen the invention of an increasing variety of corporate arrangements for performing public or quasi-public functions. The Port of New York Authority, the Rand Corporation, Comsat, and local anti-poverty community action corporations illustrate the adaptability of the corporate device to different purposes and different mixes of public and private interests. In this era of institutional invention, universities are learning to deal with the world of action in new ways with and through various corporate forms. Thus, the Urban Studies Center at Rutgers was instrumental, in collaboration with the Newark city and school governments and other voluntary organizations, in creating a new nonprofit corporation with the Dean of Rutgers University Law School as chairman, which is now the community action corporation for the City of Newark. In an entirely different area, also sparked by the poverty program, two professional schools at Rutgers have had sub-contracts with a private electronics corporation which received the prime contract to conduct the venturesome educational experiment known as the Job Corps at Camp Kilmer. Universities are finding that they can sometimes pool resources for pioneer research and teaching by organizing a consortium. These developments should receive more systematic study in order to determine how they can be best used to help universities surmount old institutional and ideological barriers.

More and more, universities are being led into new kinds of contact with the world of action through their students, sometimes on the initia-

tive of the students themselves, sometimes on that of the university or a member of its staff. Just as professors have been escaping from the classroom and the campus, so students, in the pursuit of their education, are getting out into the field or seeking to bring social or public issues to the campus. Of course there never was a time when the campus was truly isolated, but except in times of war there probably has not been a time in our history when there was such a fluid relationship between the campus and the world around it. This is partly attributable, no doubt, to the increasing number of students attending urban-based institutions, many of them commuting from home or living off campus. It is also doubtless attributable to the increasing democratization of higher education, with the resultant loss of the more or less exclusive or class character of the student body.

Be that as it may, this development is of immense significance to the university teaching role in relation to social change. The Peace Corps, the civil rights movement, the wars on the ghetto and on poverty are all furnishing new opportunities for relating the classroom to the field. The students engaged in New York and other cities during the summer and during the school term in work-study projects will never be the same and neither will the classrooms to which they return. Some of these extramural activities are being conducted on a strictly volunteer basis or with limited support from the universities themselves; others, like the work-study program, are financed by the government; others are backed by foundations. For example, in August, the Ford Foundation announced a grant to Radcliffe College for an experimental student internship in domestic and foreign anti-poverty service, and another to the Y.W.C.A. for a summer internship program for college students in the Chicago area in anti-poverty and urban problem work.

One difficulty with this type of activity is that if it is to be properly exploited from an educational point of view, it will put more, not fewer burdens on university faculties. The present acute shortage of teachers, accentuated as it is by new socially motivated programs and the chronic shortage of money in university budgets, encourages increasing use of inexperienced teachers for undergraduate instruction and the attempt to stretch the range of the voice of the master by electronic devices. In the long run, I believe we will discover that these methods have limited, if not altogether negative value, and that teaching geared to the exigencies

of social change in the future will require more and better teachers per student, rather than fewer and less well trained ones. Hopefully, the ability to meet this requirement should be one of the most valuable by-products of an age of affluence and technology able to release more people for such high level service activities as education in all its branches.

Let me now, by way of partial summary and emphasis, mention a few matters of high and urgent obligation. The universities, recognizing the strength of their peculiar position in American society, should act with confidence and without undue contentiousness to maintain their institutional integrity and freedom of expression and maneuver.

At the same time, universities must respond to legitimate demands for service to a society struggling to understand, to live with, and to give some rational and humane direction to change. If they do so respond, they can, I believe, command increasingly generous support not simply for ad hoc projects or for intellectual vindication for emergency action, but for the institutional strength required to guide a society dependent upon complex, fast moving technology.

This, as I have said before, requires the institutions to be in constant contact with the action, yet sufficiently apart from the control of it to maintain a degree of independence and ability for objective criticism and evaluation.

One of the most acute needs of our society at this juncture is for a crash program to increase the supply of trained and sophisticated manpower in many professional and leadership categories. The more we try to step up action to meet the demands of ongoing change that is of crisis proportions, the more prone we are to initiate a variety of enterprises that tend to compete for support and to cannibalize one another for talent. I therefore repeat the suggestion that we should inject more deliberate, less frantic planning into the effort to deal with change and make whatever allocation of resources may be necessary to ensure that first things get done first.

In order to provide a sound basis for such planned and programmed use of resources, universities should take the lead in making a continuing assessment of the unmet and emerging intellectual needs of the society. This assessment should attempt to identify the most critical re-

search and educational requirements and put them in some rational order of importance, timing, and feasibility.

This, of course, is no task for a single university. It warrants the early bringing together of key people from different universities and from other institutions in the knowledge business to develop a plan and strategy for such an assessment and for the formulation of guidelines for governmental and other agencies offering support for research and teaching.

If universities are to establish their capacity to play the optimum role in post-urban society, many of them must make some substantial administrative and procedural changes. These changes should provide for: (1) putting the process of self-criticism on a continuing basis; (2) instituting internal arrangements that will enable them to take a stronger position in shaping both inter- and extra-university relationships; and (3) establishing one or more centers for social experimentation and information.

Let me elaborate on the third point. Such centers would need to have core staffs sufficiently large, interdisciplinary, and talented to devise and to assist in testing new research and teaching programs and sufficiently endowed with uncommitted time to anticipate emerging needs, to dream far out dreams, and yet to be ready on occasion to turn their talents to meeting immediate emergencies.

If universities are to have the knowledge necessary to help men live well in the future, they must pay much more attention than they have heretofore to the study of the future. It is more comforting to study the past, however flimsy some of the sources may be, but the science fiction writers of today and the utopians and prophets of the past have demonstrated that the future is not quite so tightly closed a book as cautious scholars have often liked to claim. To be sure, we have for some time been trying to order many of our affairs by more or less straight-line economic and social projections, and we have often been caught up short by an unexpected hiatus or turn in the trend. Caution is clearly indicated, but caution in this case indicates investment of more effort and sophistication in the enterprise, not abandonment of it.

Early in the New Deal period, Charles A. Beard, with an attitude of some surprise, wrote a book entitled, The Future Comes. I think a little

later Professor Beard was not quite so sure how much future had come or how well he liked what he had seen. But his book was a portent. The future did come with an unaccustomed rush in the 1930's. It now keeps on coming at an ever faster pace and with increasing impact.

As we study the future, we can, at the very least, make much more systematic and accurate probings of the probable social consequences of scientific and technological developments and of the social side effects of social programs designed primarily to meet a particular objective or solve a particular problem. As Professor Morrison of M.I.T. in his new book, Men, Machines and Modern Times, has suggested, we should be an "experimental society." The profit motive in American industry and our national penchant for action as the sovereign remedy for all ills lead us, without thinking, to create new conditions for ourselves for which we are totally unprepared. Professor Morrison, therefore, suggests, and I commend the suggestion to our universities as well as to our governments, that whenever possible we test the effects of new machines or techniques in comparable experimental situations to find out not only how they work in a technical sense, but also how they work on people and how people react to them.

Unless modern man is incredibly foolish, most of his future and his satisfaction with life on earth is ahead of him. The exploration and conquest of the future should be not only his greatest adventure, but also the object of his most intensive study and reflection.